



RESIST PATTERN FORMING METHOD

Background of the Invention

1. Field of the Invention

5 The present invention relates to a resist pattern forming apparatus and a resist pattern forming method for forming a resist pattern on a substrate such as a semiconductor wafer and a LCD substrate (a glass substrate for a liquid crystal display) and developing the substrates substrate after coating therewith, for example, a resist solution, and exposure.

2. Description of the Related Art

10 In a semiconductor apparatus fabrication process, photolithography technology is used. In photolithography technology, a resist solution is coated on a substrate such as a semiconductor wafer (hereinafter referred to as a wafer). With a photo mask, the resist film is exposed and developed. As a result, a desired resist pattern is formed on the substrate.

15 The photolithography technology is performed by a pattern forming system in which an aligner is connected to a coating and developing apparatus. For example, when the wafer is processed, the coating and developing apparatus is composed of a cassette stage, a transfer mechanism, a processing station and an interface station. The carrier stage loads and unloads a wafer carrier. The transfer mechanism conveys a wafer from a carrier placed on the carrier stage. The coating and developing apparatus is connected to the aligner.

20 The wafer is carried into a processing station with a wafer transfer mechanism. A resist film is formed thereon in a coating unit, after that the wafer is exposed in an aligner. The wafer is then brought back to the processing station, and a developing process is performed in a developing unit and the wafer is thereafter returned to the cassette with the transfer mechanism. The wafer is next transferred to an etching apparatus where the etching